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| 10/601,730 | 06/23/2003 | Todd F. Pfeifer | MSFT-1743/303844.1 | 8726 |
| 41505 | 7590 | 06/06/2006 | EXAMINER | |
| WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION) ONE LIBERTY PLACE - 46TH FLOOR PHILADELPHIA, PA 19103 | | | ROSE, HELENE ROBERTA | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2163 | |

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/601,730 | Applicant(s) PFLEIGER ET AL. | |
| | Examiner Helene Rose | Art Unit 2163 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>10/2/03 & 3/30/05</u> . | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

1. Claims 1-16 is presently pending.
2. No new claims have been added; amended; nor cancelled.
3. Applicant's arguments, filed on 3/17/2006, with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection

Claim Rejection – 35 USC 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-4 and 6-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Coden et al (US Patent No. 5,873,080, Date of Patent: February 16, 1999).

Claims 1 and 11:

Regarding claims 1 and 11, Coden teaches a method of distributing portions of a query over two or more execution engines (Figures 1 and 2, all features and column 3, lines 49-51, wherein query interface then distributes the queries to the appropriate search engines, Coden), the method comprising:

receiving an input query (column 3, lines 40-43, wherein a user input a single query with more than one media type and combined query has a query data structure which is submitted to a query interface, Coden);

identifying with a first analysis, a portion of the input query that can be processed by a first execution engine (column 3, lines 43-49, wherein the query interface stores the different parts of the query and then parses the query to separate the query according to type into queries which are

understood by the application programming interface that is designed for a particular search engine, Coden);

compiling the identified portion of the input query forming a first compiled portion (column 3, lines 51-53, wherein the search of each query type is performed by the first appropriate search engine(s) and each search engines return results which are converted to a collection of result objects, wherein each result object comprises of a quartet of information which includes part number, document number, rand, and search media type, Coden);

rewriting the input query to form a first rewritten query wherein the identified portion of the input query is removed from the input query and replaced by a first placeholder (Figure 6, all features further defined in columns 11 and 12, wherein after creating List3 in the just described manner, use to determine which result objects will remain in collection1 and collection2: and remove all result objects from collection1 and collection2 whose document number is not part of List3 and if the type of the Query List Item determined in step (630) is an operator, it gets added to the intermediate result structure and in the next step, (660), the intermediate result structure gets updated in the following manner and if the last three elements of the intermediate results structure are--in that order--opening parenthesis, collection of result objects, closing parenthesis, remove these three elements and add the collection of result objects back again to the intermediate result structure and if in step (610) it is determined that the last item in the Query Item List has been processed, then the results list on the top of the stack is returned as the Result and column 3, lines 55-57, wherein a global result object is created as a collection of all the individual result objects, Coden);

passing the first rewritten query to a second analysis engine (column 6, lines 32-36, wherein the query interface analyzes to determine the media type of the query object and search engine suited to execute the query object and column 3, lines 51-53, wherein the search of each query type is performed by the first appropriate search engine(s) and each search engines return results which are converted to a collection of result objects and lines 57-58, wherein the global result is then passed to the combiner, wherein the combiner is a collection of one or more algorithms that operates on the global result object to produce a single result list, Coden);

identifying with the second analysis engine a portion of the first rewritten query that can be processed by a second execution engine (column 3, lines 43-49, wherein the query interface stores the different parts of the query and then parses the query to separate the query according to type into queries which are understood by the application programming interface that is designed for a particular search engine and lines 51-53, wherein the search of each query type is performed by the first appropriate search engine(s) and each search engines return results which are converted to a collection of result objects and line 55-57, wherein a global result object is created as a collection of all the individual result objects, Coden); and

compiling the identified portion of the first rewritten query generating a second compiled portion wherein the input query is distributed over the first execution engine and the second execution engine (column 6, lines 51-55, wherein the query interface translates each query object into series of API calls to the respective engines, the query interface provides formatting necessary to make the query objects compatible with API's and column 3, lines 49-51, wherein query interface then distributes the queries to the appropriate search engines and lines 51-53, wherein the search of each query type is performed by the first appropriate search engine(s) and each search engines return results which are converted to a collection of result objects, Coden).

Claim 2:

Regarding claim 2, Coden teaches rewriting the first rewritten query to form a second rewritten query wherein the identified portion of the first rewritten query is removed from the first rewritten query and replaced by a second placeholder (Figure 6, all features further defined in columns 11 and 12, wherein after creating List3 in the just described manner, use to determine which result objects will remain in collection1 and collection2: and remove all result objects from collection1 and collection2 whose document number is not part of List3 and if the type of the Query List Item determined in step (630) is an operator, it gets added to the intermediate result structure and in the next step, (660), the intermediate result structure gets updated in the following manner and if the last three elements of the intermediate results structure are--in that order--opening parenthesis, collection of result objects, closing parenthesis,

remove these three elements and add the collection of result objects back again to the intermediate result structure and if in step (610) it is determined that the last item in the Query Item List has been processed, then the results list on the top of the stack is returned as the Result, Coden).

Claim 3:

Regarding claim 3, Coden teaches wherein the rewriting act further comprises wrapping the second compiled portion into the first compiled portion of the input query (column 9, lines 11-29, Coden).

Claims 4 and 14:

Regarding claims 4 and 14, Coden teaches wherein the first compiled portion and the second compiled portion may be executed over different data sources (column 7, lines 5-13, wherein searches are executed by the search engines by accessing the database of documents and/or parts and and/or associated metadata as appropriate is equivalent to portions may be executed over different data sources, and so forth, Coden).

Claims 6 and 12:

Regarding claims 6 and 12, Coden teaches a method further comprising:

executing partially the second compiled portion using the second execution engine forming the combination of second interim results and the first placeholder (column 3, lines 34-39), wherein the first placeholder remains an unexecuted part of the second compiled portion (column 2, lines 39-44, Coden);

generating a call from the second execution engine to the first execution engine requesting the data corresponding to the first placeholder (column 7, lines 8-20, Coden);

executing the first compiled portion using the first execution engine to form first interim results corresponding to the first placeholder and satisfying the call (column 8, lines 23-31, wherein the query operator object specified as part of the combined query is the AND operator, wherein this implies that for a part to satisfy the query it has to satisfy the query for all specified query media types, and a combined query could be performed for instance in the following fashion: execute the parametric query and obtain its result, lets call it Rp 184, wherein Rp 184 is an input to the text query object which specifies that only

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data in Rp should be searched to satisfy the text query, and wherein the text query returns now result Rt, wherein RT is a subset of or equal to RP);

providing the first interim results to the second execution engine (column 8, lines 46-62, Coden);
and

substituting the first interim results for the first placeholder forming the combination of second interim results and first interim results comprising combined input query results (columns 11-12, lines 51-67 and lines 3-14, wherein applying an operator between two collections of result objects, wherein assuming an operator needs to be applied between collection 1 of results objects and collection 2 of result objects, wherein determining the list of all different document numbers which appear in collection1, i.e. List1, and do the same to collection2 of result objects resulting in List2, apply the operator between List1 and List2 and create List3 of document numbers by applying the operator between each item in List1 and each item in List2, and if the operator is AND, a document number in List1 is a member of List3, if and only if it is also a member of List2 and If the operator is OR, List3 is a union of the document numbers in List1 and List2 and after creating List3 in the just described manner, use to determine which result objects will remain in collection1 and collection2 and remove all result objects from collection1 and collection2 whose document number is not part of List3, and so forth, wherein L3 is your placeholder and column 10 lines 20-24, wherein based on the two objects it produces a result list, Coden).

Claims 7, 9 and 13:

Regarding claims 7, 9, and 13, Coden teaches wherein the first execution engine and the second execution engine operate on queries comprising different data models (column 12, lines 17-25, Coden)

Claims 8 and 15:

Regarding claims 8 and 15, Coden teaches executing partially the first compiled portion using the first execution engine forming first interim results (REFER to claim 6, wherein this limitation has already been addressed, Coden);

generating a call from the first execution engine to the second execution engine requesting the data corresponding to an unidentified portion of the input query (REFER to claim 6, wherein this limitation has already been addressed, Coden);

executing the second compiled portion using the second execution engine to form second interim results and satisfying the call (REFER to claim 6, wherein this limitation has already been addressed, Coden).

providing the second interim results to the first execution engine (REFER to claim 6, wherein this limitation has already been addressed, Coden); and

combining the first interim results with the second interim results to form combined input query results (Figure 7, all features and column 12, lines 15-17, Coden).

Claim 10:

Regarding claim 10, Coden teaches a system for distributive processing of an input query (REFER to claim 1, wherein this limitation has already been addressed, Coden), the system comprising:

two or more analysis engines for separating out portions of the input query that can be compiled and executed (Figure 2, all features, Coden);

two or more execution engines for operation on the input query (REFER to claim 1, wherein this limitation has already been addressed, Coden); and

access to one or more data sources, wherein the two or more analysis engines operate to independently identify (REFER to claim 1, wherein this limitation has already been addressed and column 7, lines 6-8, Coden) and compile one or more portions of the input query (REFER to claim 1, wherein this limitation has already been addressed, Coden) wherein:

at least one of the two or more analysis engines rewrites the input query to remove the portion of the input query that corresponds to an execution engine (REFER to claim 1, wherein this limitation has already been addressed, Coden); and

the two or more execution engines process the one or more compiled portions of the input query such that partial query results from one execution engine are passed to a subsequent execution engine and combined to form overall input query results (column 10, lines 18-20, Coden).

Claim Rejections – 35 U.S.C – 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coden et al (US Patent No. 5,873,080, Date of Patent: February 16, 1999) in view of Folk-Williams et al (US Patent No. 6,834,287, Filing Date of Patent: March 14, 2001).

Claims 5 and 16:

Regarding claims 5 and 16, Coden teaches wherein a first analysis engine is a structured query language based engine (column 6, lines 11-13, Coden) and a second analysis engine. Coden is silent with respect to extensible markup language based engine. However, Folk Williams discloses an extensible markup language based engine. It would have been obvious to one of the ordinary skill in the art at the time of the invention to incorporate Folk Williams teaching into Coden system. Coden and Folk Williams are analogous art because they are from the same field of endeavor of Internet search engines. A skilled artisan would have been motivated to combine as suggested by Folk Williams at Figure 5, all features and column 4, lines 51-55, for a more efficient way of searching, navigating, manipulating and exchanging of data.

Prior Art Made of Record

1. Coden et al (US Patent No. 5,873,080) discloses a query comprising sub queries each of which could be different media type are used to search a collection of multimedia documents in a database.
2. Vlahos et al (US Publication No. 2002/0133504) discloses a distributed data processing system that may include an interface receiving a data processing request from a requesting entity, a processing server to provide access to local data processing applications, a shadow processing server to provide access to remote data processing applications, and an application server to fulfill the received data processing request by selectively accessing locally wherein and remote data processing applications transparently to the requesting entity.
3. Keith, JR. (US Publication No. 2002/0091686) discloses a method and apparatus for performing a research task within a searchable database by interchanging utilizing a multitude of search methodologies including keyword search, hierarchical search, and dichotomous key search.
4. Chang et al (US Publication No. 2004/0111401) discloses a method, system, and computer program for enabling parametric searches on source data using text search engine.


Point of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helene R. Rose whose telephone number is (571) 272-0749. The examiner can normally be reached on 8:00am - 4:30pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Helene R Rose
Technology Center 2100
May 22, 2006



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PRIMARY EXAMINER**